

## Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

- 1 1. (Presently Amended) Apparatus for use with a computer system having a  
2 memory, a local storage and an existing directory service operating in the  
3 memory, the apparatus providing naming and life cycle services for a distributed  
4 object and comprising:  
5 a moniker object which contains an identifier that universally identifies an  
6 instance of the distributed object and a moniker name; and  
7 a first stream object which automatically substitutes the moniker object for  
8 the distributed object ~~when~~ during the streaming of the distributed object is  
9 ~~streamed~~ out from the memory to the local storage so that the moniker object is  
10 stored in the local storage in place of the distributed object.
- 1 2. (Original) Apparatus according to claim 1 wherein the first stream object  
2 substitutes the moniker object for the distributed object when the distributed  
3 object is persisted.
- 1 3. (Presently Amended) Apparatus according to claim 1 further comprising a  
2 second stream object which automatically substitutes a reference to the  
3 distributed object for the moniker object ~~when~~ during the streaming of the  
4 moniker object is ~~streamed~~ in from the local storage to the memory so that a  
5 reference to the distributed object is created in memory in place of the moniker  
6 object.

- 1 4. (Original) Apparatus according to claim 3 wherein the second stream object  
2 substitutes the moniker object for the distributed object when the distributed  
3 object is resurrected.
- 1 5. (Original) Apparatus according to claim 1 wherein life cycle services are  
2 provided by associating with the moniker object a predefined policy which  
3 specifies how and when life cycle services are performed.
- 1 6. (Original) Apparatus according to claim 5 further comprising a life cycle services  
2 object which responds to the predefined policy by controlling the life cycle of the  
3 distributed object.
- 1 7. (Original) Apparatus according to claim 1 further comprising a runtime repository  
2 which includes a database of moniker name-object reference pairs.
- 1 8. (Original) Apparatus according to claim 7 further comprising a directory service  
2 factory object which responds to the moniker name by instantiating a directory  
3 service adapter object for applying the moniker name to the existing directory  
4 service when the runtime repository does not contain the moniker name.
- 1 9. (Original) Apparatus according to claim 1 wherein the distributed object is  
2 instantiated in accordance with an object model and the apparatus comprises an  
3 object model adapter which processes distributed objects instantiated with the  
4 object model.
- 1 10. (Original) Apparatus according to claim 9 wherein the object model adapter  
2 returns a reference to the distributed object together with a moniker object  
3 associated with the distributed object.

1 11. (Original) A method for use with a computer system having a memory, a local  
2 storage and an existing directory service operating in the memory, the method  
3 providing naming and life cycle services for a distributed object and comprising  
4 the steps of:

- 5 (a) instantiating a moniker object which contains an identifier that universally  
6 identifies an instance of the distributed object and a moniker name; and  
7 (b) using a first stream object to automatically substitute the moniker object  
8 for the distributed object ~~when~~ during the streaming of the distributed  
9 object ~~is streamed~~ out from the memory to the local storage so that the  
10 moniker object is stored in the local storage in place of the distributed  
11 object.

1 12. (Original) A method according to claim 11 wherein step (b) comprises the step  
2 of:

- 3 (b1) using the first stream object to substitute the moniker object for the  
4 distributed object when the distributed object is persisted.

1 13. (Original) A method according to claim 11 further comprising the step of:

- 2 (c) using a second stream object to automatically substitute a reference to the  
3 distributed object for the moniker object ~~when~~ during the streaming of the  
4 moniker object ~~is streamed~~ in from the local storage to the memory so that  
5 a reference to the distributed object is created in memory in place of the  
6 moniker object.

1 14. (Original) A method according to claim 13 wherein step (c) comprises the step  
2 of:

- 3 (c1) using the second stream object to substitute the moniker object for the  
4 distributed object when the distributed object is resurrected.

- 1 15. (Original) A method according to claim 11 further comprising the step of:  
2 (d) associating with the moniker object a predefined policy which specifies  
3 how and when life cycle services are performed.
- 1 16. (Original) A method according to claim 15 further comprising the step of:  
2 (e) instantiating a life cycle services object which responds to the predefined  
3 policy by controlling the life cycle of the distributed object.
- 1 17. (Original) A method according to claim 11 further comprising the step of:  
2 (f) creating a runtime repository which includes a database of moniker name-  
3 object reference pairs.
- 1 18. (Original) A method according to claim 17 further comprising the step of:  
2 (g) instantiating a directory service factory object which responds to the  
3 moniker name by instantiating a directory service adapter object for  
4 applying the moniker name to the existing directory service when the  
5 runtime repository does not contain the moniker name.
- 1 19. (Original) A method according to claim 11 wherein the distributed object is  
2 instantiated in accordance with an object model and wherein the method  
3 comprises the step of:  
4 (h) instantiating an object model adapter which processes distributed objects  
5 instantiated with the object model.
- 1 20. (Original) A method according to claim 19 wherein step (h) comprises the step  
2 of:  
3 (h1) returning a reference to the distributed object together with a moniker  
4 object associated with the distributed object.

1 21. (Original) A computer program product for use with a computer system having a  
2 memory, a local storage and an existing directory service operating in the  
3 memory, the computer program product providing naming and life cycle services  
4 for a distributed object and comprising a computer usable medium having  
5 computer readable program code thereon including:

6 class code for instantiating a moniker object which contains an identifier  
7 that universally identifies an instance of the distributed object and a moniker  
8 name; and

9 class code for instantiating a first stream object which automatically  
10 substitutes the moniker object for the distributed object when during the  
11 streaming of the distributed object is streamed out from the memory to the local  
12 storage so that the moniker object is stored in the local storage in place of the  
13 distributed object.

1 22. (Original) A computer program product according to claim 21 wherein the class  
2 code for instantiating a first stream object comprises method code for substituting  
3 the moniker object for the distributed object when the distributed object is  
4 persisted.

1 23. (Original) A computer program product according to claim 21 further comprising  
2 class code for instantiating a second stream object which automatically  
3 substitutes a reference to the distributed object for the moniker object when  
4 during the streaming of the moniker object is streamed in from the local storage  
5 to the memory so that a reference to the distributed object is created in memory  
6 in place of the moniker object.

1 24. (Original) A computer program product according to claim 23 wherein the class  
2 code for instantiating the second stream object includes method code for  
3 substituting the moniker object for the distributed object when the distributed  
4 object is resurrected.

- 1 25. (Original) A computer program product according to claim 21 wherein the class  
2 code for instantiating the moniker object further comprises a method for  
3 associating with the moniker object a predefined policy which specifies how and  
4 when life cycle services are performed.
- 1 26. (Original) A computer program product according to claim 25 further comprising  
2 class code for instantiating a life cycle services object which responds to the  
3 predefined policy by controlling the life cycle of the distributed object.
- 1 27. (Previously amended) A computer program product according to claim 21 further  
2 comprising program code for creating a runtime repository which includes a  
3 database of moniker name-object reference pairs.
- 1 28. (Original) A computer program product according to claim 27 further comprising  
2 class code for instantiating a directory service factory object which responds to  
3 the moniker name by instantiating a directory service adapter object for applying  
4 the moniker name to the existing directory service when the runtime repository  
5 does not contain the moniker name.
- 1 29 (Original) A computer program product according to claim 21 wherein the  
2 distributed object is instantiated in accordance with an object model and wherein  
3 the computer program product comprises class code for instantiating an object  
4 model adapter which processes distributed objects instantiated with the object  
5 model.
- 1 30. (Original) A computer program product according to claim 29 wherein an  
2 instantiated object model adapter comprises a method for returning a reference  
3 to the distributed object together with a moniker object associated with the  
4 distributed object.

1 31. (New) Apparatus according to claim 1 wherein the first stream object comprises  
2 means operable during the streaming of the distributed object out from the  
3 memory to the local storage for storing the distributed object in a persistent  
4 repository that is different from the local storage.

1 32. (New) Apparatus according to claim 31 wherein the persistent repository is  
2 located remotely from the local storage.

1 33 (New) A method according to claim 11 further comprising:  
2 (c) using the first stream object during the streaming of the distributed object  
3 out from the memory to the local storage to store the distributed object in a  
4 persistent repository that is different from the local storage.

1 34. (New) A method according to claim 33 wherein the persistent repository is  
2 located remotely from the local storage.

1 35. (New) A computer program product according to claim 21 wherein the first  
2 stream object comprises program code operable during the streaming of the  
3 distributed object out from the memory to the local storage for storing the  
4 distributed object in a persistent repository that is different from the local storage.

1 36. (New) A computer program product according to claim 35 wherein the persistent  
2 repository is located remotely from the local storage.

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